

and others, both in Texas and in New York, both gunpowder and nitroglycerine were sent both by bombshells and small balloons up into the cloud region and exploded there without any appreciable effect, notwithstanding the immense number of particles of dust and powder thus violently thrown into the cloud. The experiments of Carl Barus, for the Weather Bureau, in 1893-94 (see Weather Bureau Bulletin No. 12), showed that the vapors of phosphorus and sulphur were peculiarly effective in producing cloudy condensation. We have, therefore, no good reason for believing that the Stiger vortices can influence even the molecular processes within the cloud.

THE WEATHER BUREAU IN DOMINICA, W. I.

The Chief of the Weather Bureau has received, under date of July 12, a letter from Dr. H. A. Alford Nicholls, C. M. G., M. D., Vice-President of the Dominica Agricultural Society, informing him that—

The officer in charge of the Dominica branch of your department has been elected an honorary member of the Dominica Agricultural Society.

The pleasure that it gives the Chief to receive this appreciative recognition of the good work that the Weather Bureau is doing in the interests of the general public in the West Indies, is heightened by the receipt of the following letter from Charles E. Ashcraft, Jr., observer Weather Bureau and official in charge of the station at Roseau, Dominica. Mr. Ashcraft says:

I have the honor to inform you that I am in receipt of a letter dated the 3d instant, from the Acting Secretary of the Dominica Agricultural Society, stating that the council of the society has elected me, as the official in charge of this station of the United States Weather Bureau, an honorary member of the Society, and requesting me to inform you of the same.

This action is taken, presumably, as a token of the appreciation of the planters and other residents of Dominica, for the establishment and maintenance of one of our stations in the island. I have already extended, on behalf of the service, thanks for the compliment and assurance that it is an honor duly appreciated.

It is oftentimes difficult to distinguish between the honor due to an individual, on account of his own personal labors, and the honor due to him as representative of a government or institution. In the present case we doubt not that Mr. Ashcraft has taken the proper view of his appointment, and his admirable letter shows that he was eminently worthy of it.

THE NILE FLOODS AND THE INDIAN MONSOONS.

The official journal of the Manchester Cotton Association is entitled "Cotton," and is edited by Richard J. Allen; we copy the following from the number for Saturday, July 14, 1900:

Whether there is any relation between the Nile floods and the monsoon rains in India has been investigated by Mr. John Eliot, the meteorological reporter to the government of India. His investigations suggest that the relation is found more exact and complete than had been supposed. He gathers from the statistics and conditions for the last twenty-five years that during six of these years when the rainfall in India was about normal the Nile was also in very high flood. Mr. Eliot says that the facts are sufficient to indicate that these two agricultural countries, which are almost solely dependent for their prosperity on the distribution and amount of rainfall, are similarly affected by general meteorological conditions and variations of conditions from one year to another. It is suggested that the coincidence is due to the fact that the rainfall of the period June to September or October in Abyssinia, the south Arabian highlands, and northern India is derived from a common source. The whole of the regions mentioned become intensely heated in May, when practically no rain falls there. The solar action during that month, he argues, gives rise to meteorological changes which prepare for the advance of the monsoon currents, but do not primarily and directly induce the currents. If the currents are

deflected by local conditions, or if the southeast trade winds are weaker than usual, droughts in India and small rainfall in the Abyssinian highlands result. Last year the currents in question were deflected to south Africa. After June the monsoon current practically collapsed in the Arabian Sea, and during July, August, and September the atmospheric movements were little different from those of May, and little aqueous vapor was brought up by them from the Indian Ocean. What are the influences which cause the deflection of the currents? Mr. Eliot has previously suggested that the problem may be solved by a closer study of the meteorology of Australia, the Indian Ocean, and possibly the Antarctic Ocean. It is suggested that the new cable from the Cape to Australia and a station well south of Mauritius may be useful in enabling observers in India to get more information from the Southern Hemisphere in good time.

We have not yet seen the original paper by Mr. Eliot, to which the above seems to refer, but recall the very important paper by Eliot, published some years since, in which he shows that the southwest monsoon of India can be traced backward across the equator north of Madagascar where it merges into the southeast trade wind of the south Indian Ocean, and that this southeast trade wind is turned northward as it crosses the torrid zone, partly by reason of the great indraught toward the center of Asia and partly also by the resistance of the southeast coast of Africa against which it impinges. That, in fact, the rain that falls among the mountains of the upper Nile region has been abstracted from this southeast trade wind, which then turns toward India where it again gives up its moisture as a southwest monsoon. It would, therefore, be natural to expect an intimate relation between the rains of these two regions. If the southeast trade is feeble or does not extend far enough westward, the Nile, especially the White Nile, will receive less water and, for the same reason, the southwest monsoon will be feeble and India will receive less rain.

In the absence of the article, from which the editor of Cotton has quoted, we have taken the liberty of reprinting, on page 246, an excellent article by Mr. E. Douglas Archibald which has just appeared in Symons' Monthly Meteorological Magazine, giving a summary of the present condition of our knowledge of this subject.

ANOTHER USE FOR THE KITE.

A few years since we had occasion to enumerate the various uses to which ingenious men have applied the kite. Among these was its application to the saving of life by carrying a line from a shipwrecked vessel over the breakers to the wreckers on the shore beyond. We now learn that two young men in Chicago have given an exhibition showing how those within a besieged town or other inaccessible place can use the kite line to carry a telephone, with its separate telephone wire, through the air, and let it drop from the kite upon a distant place while the kite still remains in the air. By using a very large box kite and attaching to the kite line a little way below the kite a pulley through which runs the telephone wire, the telephone may be dropped from the pulley while the insulated wire keeps up the connection with the man at the kite reel. Of course, at the present time, when kites have rarely been sent out with more than two miles of wire, which corresponds to a horizontal distance of much less than two miles, this method does not promise to put us into communication with persons at a great distance, but it may, of course, be very useful for short distances.

A NEW METEOROLOGICAL JOURNAL.

In accordance with the announcement of a year ago, the new meteorological journal, edited by A. J. Monnet and Chr. A. C. Nell, under the title of *Nederlandsch Tijdschrift voor Meteorologie*, began with the number for July 15, 1900, and